

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims

1. (currently amended) A digital camera comprising:

an image sensor for capturing an image;

a lens arrangement arranged to focus light onto the image sensor and providing a variable focus;

a memory for storing images captured by the image sensor; and

a controller arranged to control the operation of the digital camera, the controller being arranged to perform an image capture operation comprising:

causing a series of images, each consisting of the entire image area and having differing focus provided by the lens arrangement, to be captured by the image sensor and stored in the memory; and

analyzing the images stored in the memory to determine the quality of the focus of the images and on the basis of the analysis, selecting one of the series of images determined to have the best focus as deriving an in-focus image from the series of images; and

in respect of the in-focus image performing either one or both of:

(a) displaying the in-focus image on a display of the digital camera; and

(b) retaining the infocus image in the memory in a manner allowing the user subsequently to retrieve the in-focus image from the memory.

2. (original) A digital camera according to claim 1, wherein the lens arrangement is movable to vary the focus.

3. (original) A digital camera according to claim 2, wherein the digital camera further comprises:

a button operable by a user; and

a mechanical linkage connecting the button to the lens arrangement and adapted to move the lens arrangement on operation of the button, the controller being arranged to perform said image capture operation in response to operation of the button with the series of images being captured as the lens arrangement is moved on operation of the button.

4. (original) A digital camera according to claim 3, wherein the linkage mechanism is arranged to move the lens arrangement from its rest position by depression of the button and further comprises:

a resilient element arranged to bias the lens arrangement back towards its rest position after depression of the button; and

a damper arranged to control the speed of movement of the lens arrangement back towards its rest position,

the controller being arranged to perform said image capture operation with the series of images being captured as the lens arrangement is moved back towards its rest position after depression of the button.

5. (currently amended) A digital camera according to claim 2 or 3, wherein the digital camera further comprises an actuator arranged to move the lens arrangement, and the image capture operation further comprises controlling the actuator to move the lens arrangement to vary the focus, said capture of the series of images being performed as the actuator is thus moved.

6. (original) A digital camera according to claim 5, wherein the actuator is a piezoelectric actuator or an electric motor.

7. (cancelled)

8. (original) A digital camera according to claim 6, wherein the quality of the focus of the images is determined on the basis of an area of analysis which is a partial area of the entire image area.

9. (cancelled)

10. (cancelled)

11. (cancelled)

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (currently amended) A digital camera according to ~~any one of the preceding claims~~claim 1, wherein said step of said image capture operation which said controller is arranged to perform of analyzing the images stored in the memory to determine the quality of the focus of the images and, on the basis of the analysis, selecting one of the series of images determined to have the best focus as deriving an in-focus image ~~from the series of images~~ is performed after all the series of images have been stored in the memory.

16. (currently amended) A digital camera according to ~~any one of claims 1 to 13~~claim 1, wherein said step of said image capture operation which said controller is arranged to perform of analyzing the images stored in the memory to determine the quality of the focus of the images and, on the basis of the analysis, selecting one of the series of images determined to have the best focus as deriving an in-focus image ~~from the series of images~~ is performed as successive images of the series are captured by

initially storing the first image of the series as said in-focus image and
in respect of each successive image in the series analysing the image to determine the quality of the focus of the image in comparison with the image stored as said in-focus image and on the basis of the analysis updating the image stored as said in-focus image.

17. (cancelled)

18. (cancelled)

19. (currently amended) A focus method for a digital camera having an image sensor for capturing an image, a lens arrangement arranged to focus light onto the image sensor and having

a variable focus, and a memory for storing images captured by the image sensor, the autofocus method comprising:

capturing a series of images on the image sensor, each captured image consisting of the entire image area, and storing them the captured images in the memory; and

analysing the images stored in the memory to determine the quality of the focus of the images and, on the basis of the analysis, selecting one of the series of images determined to have the best focus as deriving an in-focus image from the series of images; and

in respect of the in-focus image performing either one or both of:

(a) displaying the in-focus image on a display of the digital camera; and

(b) retaining the in-focus image in the memory in a manner allowing the user subsequently to retrieve the in-focus image from the memory.

20. (cancelled)

21. (cancelled)

22. (cancelled)